



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0451; Project Identifier AD-2022-00265-T; Amendment 39-22010; AD 2022-08-07]

RIN 2120-AA64

Airworthiness Directives; Embraer S.A. (Type Certificate Previously Held by Yaborá Indústria Aeronáutica S.A.) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Embraer S.A. Model ERJ 170-100 STD, -100 LR, -100 SU, and -100 SE; ERJ 170-200 STD, -200 LR, -200 SU; ERJ 190-100 STD, -100 LR, -100 IGW, and -100 ECJ; and ERJ 190-200 STD, -200 LR, and -200 IGW airplanes. This AD was prompted by a report of the failure of the inner pane of certain passenger windows to meet maximum operating pressure and lack of fail-safe design. This AD requires determining if certain NORDAM passenger windows are installed, and performing corrective actions if any affected part is installed. This AD also prohibits the installation of affected parts. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The FAA must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0451; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The street address for the Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Jacob Fitch, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-4130; email jacob.fitch@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA received a voluntary self-disclosure report indicating possible failure of the inner pane of certain passenger windows to meet fail-safe loads in the event of the complete failure of the outer pane. Manufacturer testing was performed to confirm the inadequacy of the inner window pane design. The results of the testing revealed that the inner pane of the passenger window failed to meet maximum operating pressure. The root cause was determined to be an inner window pane dimensional thickness that is

inadequate to support cabin pressurization loads. As a result, the design was found to not be fail safe, meaning that the window assembly does not retain the required residual strength to maintain safe flight and landing of the aircraft after a failure or partial failure of the outer window pane. This affects any Nordam Group Inc. Transparency Division (NORDAM) passenger window having part number (P/N) NP00038-3. Failure of the window's inner pane to meet maximum operating pressure and lack of fail-safe design, if not addressed, could result in possible serious injury to a passenger near the window due to rapid decompression, and consequent reduced ability of the flightcrew to maintain the safe flight and landing of the airplane. The FAA is issuing this AD to address the unsafe condition on these products.

FAA's Determination

The FAA is issuing this AD because the agency has determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

AD Requirements

This AD requires determining if any affected part, the NORDAM passenger window having P/N NP00038-3, is installed; repetitively inspecting the outer pane of affected parts for cracking; immediately replacing cracked affected parts with serviceable windows; and eventually replacing all affected parts, within 90 days, which eliminates the need for the repetitive inspections. This AD also prohibits the installation of affected parts.

Justification for Immediate Adoption and Determination of the Effective Date

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C. 551 *et seq.*) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for "good cause," finds that those procedures are "impracticable, unnecessary, or contrary to the public interest." Under this section, an agency, upon

finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies forgoing notice and comment prior to adoption of this rule because due to the lack of a fail-safe design and failure of the window's inner pane to meet maximum operating pressure, a complete failure of the outer window pane could result in possible serious injury to a passenger near the window due to rapid decompression, and consequent reduced ability of the flightcrew to maintain the safe flight and landing of the airplane. Accordingly, notice and opportunity for prior public comment are impracticable and contrary to the public interest pursuant to 5 U.S.C. 553(b)(3)(B).

In addition, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days, for the same reasons the FAA found good cause to forgo notice and comment.

Comments Invited

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under ADDRESSES. Include Docket No. FAA-2022-0451 and Project Identifier AD-2022-00265-T at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all

comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this AD contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this AD, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this AD. Submissions containing CBI should be sent to Jacob Fitch, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-4130; email jacob.fitch@faa.gov. Any commentary that the FAA receives that is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Regulatory Flexibility Act

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects up to 65 airplanes of U.S. registry. (A total of 65 affected parts were produced.) The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Part number inspection	Up to 1 work-hour X \$85 per hour = \$85	\$0	\$85	Up to \$5,525

The FAA estimates the following costs to do any necessary actions that would be required based on the results of the part number inspection. The FAA has no way of determining the number of aircraft that might need these actions:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Repetitive inspection for cracking	1 work-hour X \$85 per hour = \$85	\$0	\$85 per inspection cycle
Replacement	2 work-hours X \$85 per hour = \$170	\$500	\$670

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress

charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866, and
- (2) Will not affect intrastate aviation in Alaska.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-08-07 Embraer S.A. (Type Certificate Previously Held by Yaborã Indústria Aeronáutica S.A.): Amendment 39-22010 ; Docket No. FAA-2022-0451; Project Identifier AD-2022-00265-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Embraer S.A. airplanes identified in paragraphs (c)(1) through (4) of this AD, certificated in any category.

(1) Model ERJ 170-100 STD, -100 LR, -100 SU, and -100 SE airplanes.

(2) Model ERJ 170-200 STD, -200 LR, and -200 SU airplanes.

(3) Model ERJ 190-100 STD, -100 LR, -100 IGW, and -100 ECJ airplanes.

(4) Model ERJ 190-200 STD, -200 LR, and -200 IGW airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 56, Windows.

(e) Unsafe Condition

This AD was prompted by a report of the failure of the inner pane of the passenger window to meet maximum operating pressure and lack of fail-safe design. The FAA is issuing this AD to address this condition, which could result in possible serious injury to a passenger near the window due to rapid decompression, and consequent reduced ability of the flightcrew to maintain the safe flight and landing of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Definition of Affected Parts

Affected parts are NORDAM passenger windows having part number NP00038-3.

(h) Identification of Affected Parts

Before further flight, determine whether any affected part is installed on the airplane. A review of the airplane maintenance records is acceptable, if the manufacturer and part number of the installed windows can be conclusively determined from that review.

Note 1 to paragraph (h): Guidance for the actions required by paragraph (h) of this AD can be found in NORDAM Alert Service Bulletin ERJ 56-A01, dated January 18, 2022.

(1) If any affected part is installed: Before further flight, do a visual inspection of the outer window pane for cracking, and do the applicable action specified in paragraph (h)(1)(i) or (ii) of this AD.

(i) If any cracking is found, before further flight, replace the affected part with a serviceable window.

(ii) If no cracking is found, repeat the inspection thereafter before each flight, until the affected part is replaced, as specified in paragraph (h)(2) of this AD.

(2) Within 90 days after the effective date of this AD: Replace all affected parts installed on the airplane with serviceable windows.

(i) Terminating Action for Repetitive Inspections

Replacement of an affected part, as specified in paragraph (h)(2) of this AD, terminates the repetitive inspection requirements specified in paragraph (h)(1)(ii) of this AD for that part.

(j) Parts Installation Prohibition

As of the effective date of this AD, no person may install a NORDAM passenger window, part number (P/N) NP00038-3, on any airplane.

(k) Alternative Methods of Compliance (AMOCs).

(1) The Manager, Large Aircraft Section, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the Large Aircraft Section, International Validation Branch, send it to the attention of the person identified in paragraph (l) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(l) Related Information

For more information about this AD, contact Jacob Fitch, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-4130; email jacob.fitch@faa.gov.

(m) Material Incorporated by Reference

None.

Issued on April 4, 2022.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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